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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/539,466

10/12/2005

Yong-Soo Lee

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DES MOINES, IA 50309-2721

EXAMINER

BAER, JENNIFER M

ART UNIT

PAPER NUMBER

2809

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

04/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

TH

Office Action Summary

Application No.

10/539,466

Applicant(s)

LEE ET AL.

Examiner

Jennifer M. Baer

Art Unit

2809

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/14/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 1 recites the limitation "said open ink injecting hole" in step (S2). There is insufficient antecedent basis for this limitation in the claim because it had not been previously introduced in the claim. Appropriate correction is required.
2. Claim 1 is objected to because of the following informalities: the "and" after "said ink injecting hole" in (S4) is inappropriately placed. Appropriate correction is required.
3. Claim 1 is objected to because of the following informalities: the "and" after "predetermined sealing cork" in (S5) is inappropriately placed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "it" and "outside" are not defined in the claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanaya et al. (US 6,247,803 B1) in view of Tsukuni (US 2001/0022601 A1) and Doll et al. (US 5,802,818).

In regards to claim 1, Kanaya et al. teaches a method of refilling ink in an ink cartridge (10000) for an inkjet printer, the method comprising:

(S1) a step to remove a cover which is covered on an ink injecting hole (2410) formed on one side of the main body of said ink cartridge (10000) (Fig. 35) (col. 21 lines 48-51);

(S2) a step to insert a rubber cork (2420)(Kanaya et al. teaches that a rubber sheet having a large resilient recovering force may be used where the supply needle 4300 would then pierce through the rubber sheet, forming a cork into the ink supply hole, and ink would be supplied, col. 21, lines 62-65) into said open ink injecting hole (2410);

(S3) a step to form an ink bubbles discharging hole (10100) on a predetermined position of a cover (2400) of said ink cartridge (10000) which covers said main body of said ink cartridge (Fig. 35) (for an air vent hole ... to allow air to escape during replenishment, col. 21, lines 59-61);

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(S4) a step to slowly inject ink into said ink cartridge (10000) after inserting a needle (4300) of an ink injector (4000) into said rubber cork which is inserted into said ink injecting hole (2410) (col. 21, lines 62-65) and;

(S5) a step to extract said ink injector (4000) from said rubber cork (2420).

Kanaya et al. fails to teach a vinyl cover. Tsukuni teaches a vinyl cover (14) [0059] (Fig. 1). Since both Kanaya et al. and Tsukuni teach ink containers, it would have been obvious to one skilled in the art to use a vinyl cover because it is known in that art that a vinyl material provides adequate strength for use as a cover.

Kanaya et al. fails to teach after sealing said ink bubbles discharging hole formed on said cover with a predetermined sealing cork. Doll et al. teaches after sealing said ink bubbles discharging hole (24) formed on said cover (10) with a predetermined sealing cork (74) (Fig. 7, col. 5, lines 57-61). Since both Kanaya et al. and Doll et al. teach methods for refilling ink chambers, it would have been obvious to one skilled in the art at the time of invention to have the cork of Doll et al. in Kanaya et al. because sealing the discharging hole with a cork would produce a more efficient and clean method.

In regards to claim 2, Kanaya et al. fails to teach to seal the ink bubbles discharging hole is performed at the time when the ink is fully refilled in the ink cartridge and it is discharged to the outside.

Doll et al. teaches after sealing said ink bubbles discharging hole (24) formed on said cover (10) with a predetermined sealing cork (74) (Fig. 7, col. 5, lines 57-61). Since both Kanaya et al. and Doll et al. teach methods for refilling ink chambers, it would have been obvious to one skilled in the art at the time of invention to have the cork of Doll et al. in Kanaya et al. because sealing the discharging hole with a cork would produce a more efficient and clean method. It would have been an obvious to one of ordinary skill in the art that time the invention was made to fully refill the ink cartridge before it is discharge to the outside since it was known in the art that a fully refilled ink container would provide for a more efficient printer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer M. Baer whose telephone number is 571-270-1621. The examiner can normally be reached on mon-fri, 7:30-5:00, Alt Fri est. time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on 571-270-1809. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JB 4/12/2007

STEVEN LOKE
SUPERVISORY PATENT EXAMINER

Steven Loke